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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/731,903

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EXAMINER

BAE, JI H

ART UNIT

PAPER NUMBER

2115

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/731,903	<b>Applicant(s)</b> KAWANO ET AL.	
	<b>Examiner</b> Ji H. Bae	<b>Art Unit</b> 2115	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 9-11 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 9-11 are directed towards a computer program *per se*. A computer program is merely an instance of an abstract idea or concept (in this case, an algorithm), and as such does not fall within one of the statutory categories for invention.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6-8, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Mason et al., U.S. Patent No. 6,161,187.

Regarding claim 1, Mason discloses an information processor including a central processing unit having an instruction execution module, said central processing unit having a normal mode or operating said instruction execution module and an execution halt mode for halting said instruction execution module; said information processor comprising:

a voltage controlling module for causing said instruction execution module to execute a voltage reduction instruction for placing said central processing unit into a low-voltage operation

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mode in which the operating voltage of said central processing unit is lowered from the operating voltage in said normal mode when said central processing unit switches from said normal mode to said execution halt mode [col. 5, lines 12-42]; and

a mode controlling module for placing said central processing unit into a low-voltage halt mode in which said instruction execution module is halted under the operating voltage for said low-voltage operation mode when said voltage controlling module places said central processing unit into said low-voltage operation mode [col. 8, lines 48-59].

Regarding claim 2, Mason teaches a halt grant signal allowing the instruction execution module to halt, wherein the mode controlling module places the CPU into a low-voltage halt mode when the module received the halt grant signal [col. 3, lines 45-48].

Regarding claim 3, Mason teaches receiving an interrupt request for returning voltage of an information processor to previous levels, and resuming the execution of instructions [col. 8, line 60 to col. 9, line 9].

Regarding claims 6 and 7, Mason teaches that the CPU voltage may be reduced to zero, or a value greater than zero so that register values in the CPU may remain valid [col. 5, lines 50-60]. As such, the non-zero reduced voltage may be viewed an intermediate voltage operation mode. Alternatively, the non-zero reduced voltage may be viewed as a low-voltage operation mode, and the zero voltage level may be viewed as a voltage reduction mode with voltage lower than the low-voltage operation mode.

Regarding claim 8, Mason also teaches that in addition to reducing the voltage of the information processor, a clock frequency may also be reduced [col. 8, line 52-55].

Regarding claims 12 and 13, Mason teaches the information processor as recited in claims 1 and 8. Mason also teaches that the information processor implements the methods recited in claims 12 and 13.

***Allowable Subject Matter***

Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Youngs, U.S. Patent No. 6,920,574 B2;

Chang et al., U.S. Patent No. 5,627,788;

Atkinson, U.S. Patent No. 6,802,015 B2;

Townsley et al., U.S. Patent No. 5,623,677;

Hashimoto, U.S. Patent No. 7,007,180 B2;

Horden et al., U.S. Patent No. 5,812,860.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ji H. Bae whose telephone number is 571-272-7181. The examiner can normally be reached on Monday-Friday, 10 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**CHUN CAO**  
**PRIMARY EXAMINER**